Amendments to Claims

1. (Currently Amended) An aqueous dispersion ~~comprising~~ consisting essentially of

A. a partially fluorinated urethane polymer having at least one urea linkage, which compound is the product of the reaction of: (1) at least one organic polyisocyanate containing at least three isocyanate groups; (2) at least one fluorochemical compound which contains per molecule (a) a single functional group having one or more Zerewitinoff hydrogen atoms and (b) at least two carbon atoms, each of which is attached to at least two fluorine atoms; and (3) water in an amount sufficient to react with from about 5% to about 60% of the isocyanate groups in said polyisocyanate;

B. a non-fluorinated cationic surfactant; and

C. a non-fluorinated nonionic surfactant,

said dispersion providing oil and water repellency upon application to a fibrous substrate without causing tip staining.

2. (Original) The dispersion of Claim 1 wherein the cationic surfactant is selected from the group consisting of salts of protonated amines, quaternary ammonium salts, and amine oxides.

3. (Original) The dispersion of Claim 2 wherein the cationic surfactant is selected from the group consisting of at least one of a protonated alkyl dimethyl amine salt, protonated dialkyl methyl amine salt, protonated alkyl ethoxylated amine salt, protonated alkyl diamine salt, protonated alkyl ethoxylated diamine salt, alkyl trimethyl ammonium salt, dialkyl dimethyl ammonium salt, alkyl methyl ethoxylated ammonium salt, alkyl dimethyl benzyl ammonium salt, dialkyl methyl benzyl ammonium salt, alkyl pyridinium salt, alkylamidomethyl pyridinium salt, carboalkoxy pyridinium salt, alkyl quinolinium salt, alkyl isoquinolinium salt, N,N-alkyl methyl pyrollidinium salt, amidoimidazolium salt, amido ammonium salt, quaternary ammonium salt of alkyl diamine, ethoxylate of a quaternary ammonium salt of alkyl diamine, alkyl dimethyl amine oxide, dialkyl methyl amine oxide, and alkyl diamine oxide.

4. (Original) The dispersion of Claim 3 wherein the cationic surfactant is dialkyl dimethyl ammonium chloride.

5. (Original) The dispersion of Claim 1 wherein the nonionic surfactant is a condensate with ethylene oxide of at least one of a fatty acid alkanol amide, an alkyl phenol, a fatty acid, a fatty alcohol, an ester of a fatty acid and polyhydric alcohol, and a polyoxypropylene block copolymer.

6. (Original) The dispersion of Claim 5 wherein the nonionic surfactant is of the formula A

$$C_xH_{(2x+1)}O\text{-}(CH_2CH_2O)_n\text{-}H \qquad A$$

wherein x is 12 to 18 and n is 5 to 100.

7. (Original) The dispersion of Claim 6 wherein the nonionic surfactant is a polyethoxylated linear alcohol.

8. (Original) The dispersion of Claim 1 wherein the cationic surfactant is selected from the group consisting of salts of protonated amines, quaternary ammonium salts, and amine oxides, and the nonionic surfactant is a condensate with ethylene oxide of at least one of a fatty acid alkanol amide, an alkyl phenol, a fatty acid, a fatty alcohol, an ester of a fatty acid and polyhydric alcohol, and a polyoxypropylene block copolymer.

9. (Original) The dispersion of Claim 8 wherein the cationic surfactant is dialkyl dimethyl ammonium chloride and the non-ionic surfactant is a polyethoxylated linear alcohol.

10. (Original) The dispersion of Claim 1 wherein the amount of surfactant is from about 1.5% to about 8% by weight based on the amount of the partially fluorinated urethane polymer.

11. (Original) The dispersion of Claim 1 wherein the amount of water is sufficient to react with about 15% to about 30% of said isocyanate groups.

12. (Original) The dispersion of Claim 1 wherein the polyisocyanate is selected from the group consisting of hexamethylene diisocyanate homopolymer, hydrocarbon diisocyanate-derived trimer,

isocyanate trimer of toluene diisocyanate, and isocyanate trimer of 3-isocyanato-methyl-3,4,4-trimethylcyclohexyl isocyanate.

13. (Original) The dispersion of Claim 1 wherein said fluorochemical compound which contains a single functional group is represented by the formula:

$$R^f\text{-}R_k\text{-}X\text{-}H$$

in which

R^f is a monovalent aliphatic group containing at least two carbon atoms each of which is attached to at least two fluorine atoms;

R is a divalent organic radical;

k is 0 or 1; and

X is -O-, -S-, or -N(R^3)- in which R^3 is H, alkyl containing 1 to 6 carbon atoms or a R^f-R_k- group.

14. (Original) The dispersion of Claim 1 wherein said fluorochemical compound which contains a single functional group is represented by the formula:

$$R^f\text{-}(CH_2)_q\text{-}X\text{-}H$$

in which

R^f is a mixture of perfluoroalkyl groups, $CF_3CF_2(CF_2)_r$ in which r is 2 to 18; and

q is 1, 2 or 3.

15. (Original) The dispersion of Claim 14 wherein R^f is a mixture of said perfluoroalkyl groups, $CF_3CF_2(CF_2)_r$; and r is 2, 4, 6, 8, 10, 12, 14, 16, and 18.

16. (Original) The dispersion of Claim 14 wherein X is oxygen and q is 2.

17. (Original) The dispersion of Claim 1 wherein said fluorochemical compound which contains a single functional group is represented by the formula:

$$R^f\text{-}R_k\text{-}R^2\text{-}X'\text{-}H$$

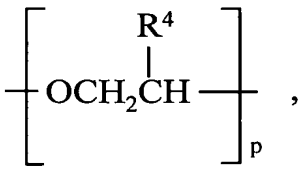
wherein

R^f is a monovalent aliphatic group containing at least two carbon atoms each of which is attached to at least two fluorine atoms;

R is the divalent radical: $-C_mH_{2m}SO-$, $-C_mH_{2m}SO_2-$, $-SO_2N(R^3)-$, or $-CON(R^3)-$ in which m is 1 to 22 and R^3 is H or alkyl of 1 to 6 carbon atoms;

k is 0 or 1;

R^2 is the divalent linear hydrocarbon radical: $-C_nH_{2n}-$ which can be optionally end-capped by



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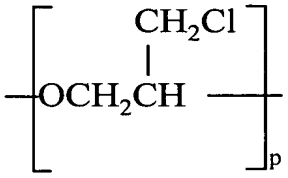

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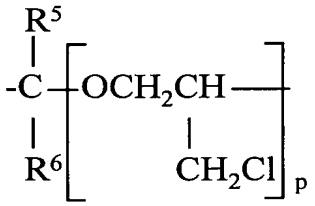


n is 0 to 12, p is 1 to 50, and R^4, R^5 and R^6 are the same or different H or alkyl containing 1 to 6 carbon atoms; and

X' is -O-, -S-, or $-N(R^7)-$ in which R^7 is H, alkyl containing 1 to 6 carbon atoms or a $R^f-R_k-R^2-$ group.

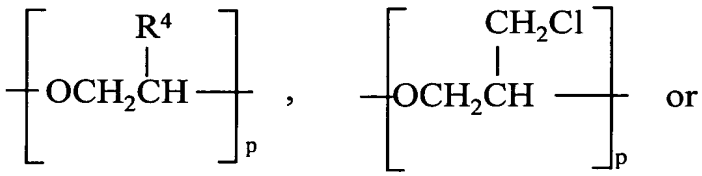
18. (Original) The dispersion of Claim 1 additionally comprising a non-fluorinated organic compound represented by the formula:

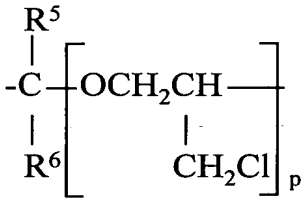
$$R^{10}-(R^{11})_k-YH$$

wherein

R^{10} is a C_1-C_{18} alkyl, a C_1-C_{18} omega-alkenyl radical or a C_1-C_{18} omega-alkenoyl;

R^{11} is





R^4, R^5 and R^6 are the same or different H or alkyl radical containing 1 to 6 carbon atoms and p is 1 to 50;

k is 0 or 1; and

Y is -O-, -S-, or -N(R^3)- in which R^3 is H or alkyl containing 1 to 6 carbon atoms.

Claims 19-29 (Withdrawn)